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09/716,113	11/16/2000	STEPHEN JOHN RUIZ	004164.P004	4948

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EXAMINER

NGUYEN, XUAN LAN T

ART UNIT

PAPER NUMBER

3683

DATE MAILED: 03/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.



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**BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES**

Paper No. 18

Application Number: 09/716,113  
Filing Date: November 16, 2000  
Appellant(s): RUIZ, STEPHEN JOHN

**MAILED**

MAR 06 2003

**GROUP 3600**

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Steven Laut  
For Appellant

**EXAMINER'S ANSWER**

This is in response to the appeal brief filed 12/31/02.

**(1) *Real Party in Interest***

A statement identifying the real party in interest is contained in the brief.

**(2) *Related Appeals and Interferences***

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

**(3) *Status of Claims***

The statement of the status of the claims contained in the brief is correct.

**(4) *Status of Amendments After Final***

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

**(5) *Summary of Invention***

The summary of invention contained in the brief is correct.

**(6) *Issues***

The appellant's statement of the issues in the brief is correct.

**(7) Grouping of Claims**

Appellant's brief includes a statement that claims 1, 3, 5, 6, 21, 23, 25 and 26 do not stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

**(8) Claims Appealed**

The copy of the appealed claims contained in the Appendix to the brief is correct.

**(9) Prior Art of Record**

Appellant's submitted prior art, Figures 1 and 2 in the specification of the instant invention.

5,427,212

SHIMAZU ET AL.

6-1995

**(10) Grounds of Rejection**

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 3, 5, 6, 21, 23, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Appellant's submitted prior art figures 1 and 2 in view of Shimazu et al.

Re: claim 1, figure 2 shows a mounting hat 120 for a brake rotor 110, as in the present invention, comprising: a lower section (not numbered) coupled to an upper section (not numbered), a plurality of aerodynamically shaped standoff vanes 126 each

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having a leading edge, a trailing edge, a top and a bottom coupled to the upper section, the aerodynamically shaped standoff vanes space apart the upper section from a brake rotor as shown in figures 1 and 2; and a plurality of vents 132 formed between adjacent aerodynamically shaped standoff vanes, wherein the vents are circumferentially distributed on the upper section, and air flow is induced to flow through the plurality of vents. Note that the term "aerodynamic" has been treated broadly. Submitted prior art figures 1 and 2 lack the leading edge and the trailing edge to be curved. Shimazu et al. teach the concept of providing a curving design in place of a straight design to improve airflow to increase heat removal. This concept is illustrated in figures 1 and 5 where vanes 22 has a curved design instead of a straight design of vanes F in order to improve air flow to increase heat removal. Shimazu et al. explain this concept further in column 1, lines 12-46 and column 2, lines 52-57. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the submitted prior art's standoff vanes to include a curved design having taught by Shimazu et al. the concept of improving air flow by changing a straight design to a curve design in figures 1 and 5, column 1, lines 12-46 and column 2, lines 52-57.

Re: claim 3, figure 2 shows the leading edge and the trailing edge of the plurality of aerodynamically shaped standoff vanes are one of stepped up and ramped up from the upper section towards the top of the plurality of aerodynamically shaped standoff vanes.

Re: claims 5 and 25, submitted prior art figures 1 and 2 lack the leading edge and the trailing edge to be asymmetrical. Shimazu et al. further teach the concept of

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providing a curving design where the leading edge and the trailing edge are asymmetrical from a center point along each of the leading edge and the trailing edge in figure 13 where the leading edge 521 is asymmetrical to trailing edge 52E from a center point 52U, instead of a symmetrical design of vanes 22D in figure 10 in order to produce different air flow patterns. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have further modified the submitted prior art's standoff vanes to include an asymmetrical design such as taught by Shimazu in order to produce different air flow patterns depending on different cooling needs.

Re: claim 6, figure 2 shows a bore on each standoff vane 126.

Re: claim 21, figure 1 shows a brake rotor 110, a hub 120, standoff vanes 126 and vents 132 as discussed in the above claim 1 rejection.

Re: claim 23, figure 2 shows the leading edge and the trailing edge of the plurality of aerodynamically shaped standoff vanes are one of stepped up and ramped up from the upper section towards the top of the plurality of aerodynamically shaped standoff vanes.

Re: claim 26, figure 2 shows a bore on each standoff vane 126.

**(11) Response to Argument**

*Appellant argues that the combination of submitted prior art, figures 1 and 2 and Shimazu is improper due to no motivation to combine.*


The Examiner maintains that there is an obvious motivation to combine. Shimazu teaches the concept of improving airflow by changing a straight design to a

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curve design. In column 1, lines 12-46, Shimazu discussed the disadvantages of a straight design of fins in a rotor wherein because of the straight design, the air is not directed but stagnated. Due to this poor airflow, heat is not properly removed. The straight design is further illustrated in figures 1, 3 and 4. In figure 5, the curved design is illustrated. The advantages of this curved design is explained in the Summary of the Invention. Particularly in lines 6-10 and 53-57, Shimazu states that the curved design would improve heat transfer. Shimazu is solving the same problem as the Appellant, improving heat transfer, in the same manner, changing from a straight design to a curved design. Hence, Shimazu shows the proper motivation to combine. If Shimazu has taught to change a straight design of stand off vanes to a curved design of stand off vanes, it would have been an anticipation of the same structure and would not need to combine with another other references.

For the above reasons, it is believed that the rejections should be sustained.

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Lan Nguyen  
February 27, 2003

Conferees  
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Respectfully submitted,

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PRIMARY EXAMINER

